

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

Art Unit: 1616

PERRY ET AL.

Examiner: Sullivan, Danielle D.

APPLICATION NO: 10/596,281

Conf. No.: 4892

FILED: June 8, 2006

IA FILING DATE: December 6, 2004

FOR: **AGROCHEMICAL COMPOSITIONS**

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Commissioner of Patents  
P.O. Box 1450  
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**ATTENTION: Board of Patent Appeals and Interferences**

**APPELLANTS BRIEF (37 C.F.R. 41.37)**

This brief is in furtherance of the Notice of Appeal, filed in this case on June 22, 2009.

The fees required under 37 C.F.R. 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

**I. REAL PARTY IN INTEREST**

The real party in interest in this appeal is Syngenta Limited.

## **II. RELATED APPEALS AND INTERFERENCES**

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal, there are no such appeals or interferences.

### **III. STATUS OF CLAIMS**

The status of the claims in this application is:

Claims 1-22 are in the application.

Claims 2, 3 and 5-7 have been cancelled.

Claims 1, 4, 5 and 8-22 have been rejected.

The claims on appeal are 1, 4, 5 and 8-22.

#### **IV. STATUS OF AMENDMENTS**

In the June 16, 2009 Advisory Action, the Examiner has indicated that the proposed amendments filed subsequent to final rejection will be entered for purposes of appeal.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The present claims are directed to an agrochemical composition comprising an agrochemical active ingredient which is paraquat or diquat or mixtures thereof and an amine adjuvant selected from triethylenediamine (TEDA) or a salt thereof and tetramethylethylenediamine (TMEDA) or a salt thereof, which amine adjuvant has no surfactant properties, and wherein the ratio by weight of the amine adjuvant to the agrochemical active ingredient is from 1:10 to 1:2.

The claimed subject matter is:

- 1) An agrochemical composition comprising an agrochemical active ingredient which is paraquat or diquat or mixtures thereof (page 2, lines 24-26; page 3, lines 9-12) and
- 2) an amine adjuvant selected from triethylenediamine (TEDA) or a salt thereof and tetramethylethylenediamine (TMEDA) or a salt thereof, (page 1, line 12-14; page 3, lines 9-12)
- 3) which amine adjuvant has no surfactant properties, (page 1, line 20) and
- 4) wherein the ratio by weight of the amine adjuvant to the agrochemical active ingredient is from 1:10 to 1:2. (page 7, line10)

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

- I. Whether claims 1, 4, 5 and 8-22 are properly provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 and 6-22 of copending Application No. 10/578,211.
- II. Whether claims 1, 4, 5 and 8-22 are properly provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 and 6-22 of copending Application No. 10/596,268.
- III. Whether claims 1, 4, 5, 8-13, 21 and 22 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Ashford et al. (WO 02/076212) in view of Scher et al. (US 5,562,914); and
- IV. Whether claims 14-20 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Ashford et al. (WO 02/076212) in view of Scher et al. (US 5,562,914) in further view of Humble et al. (US 6,734,141).

## VII. ARGUMENTS

**Claims 1, 4, 5 and 8-22 have been provisionally rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 1-4 and 6-22 of copending Application No. 10/578,211.** Appellants respectfully traverse.

Appellants acknowledge the provisional obviousness-type double patenting rejection of claims 1 – 4 and 6 – 22 over co-pending and commonly owned application 10/578,211. Appellants respectfully disagree with the Examiner's assessment. Appellants submit that there is sufficient difference between the respective applications to merit withdrawal of this rejection. Appellants respectfully traverse the Examiner's contention, but will consider the filing of a terminal disclaimer once allowable subject matter has been identified by the Examiner.

**Claims 1, 4, 5 and 8-22 have been provisionally rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 1-4 and 6-22 of copending Application No. 10/596,268.** Appellants respectfully traverse.

Applicants acknowledge the provisional obviousness-type double patenting rejection of claims 1 – 4 and 6 – 22 over co-pending and commonly owned application 10/596,268. Application Serial No. 10/596,268 has been abandoned due to Appellants failure to respond to the outstanding office action. Accordingly, Appellants submit that this rejection is moot.

**Claims 1, 4, 5, 8-13, 21 and 22 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Ashford et al. (WO 02/076212) in view of Scher et al. (US 5,562,914).** Appellants respectfully traverse.

The present claims are directed to an agrochemical composition comprising an agrochemical active ingredient which is paraquat or diquat or mixtures thereof and an amine adjuvant selected from triethylenediamine (TEDA) or a salt thereof and tetramethylethylenediamine (TMEDA) or a salt thereof, which amine adjuvant has no surfactant properties, and wherein the ratio by weight of the amine adjuvant to the agrochemical active ingredient is from 1:10 to 1:2.

In the Advisory Action, the Examiner states:

“it would have been obvious to one of ordinary skill in the art to combine the teachings of Ashford and Scher to include TEDA as an adjuvant which acts as a



catalyst. The present invention does not recite that the adjuvant has no catalyst properties, only surfactant properties are excluded. Furthermore, both the present invention and the prior art teaches utilizing TEDA as a catalyst in agrochemical formulations which comprise glyphosate, a functional equivalent of paraquat and diquat.”

Ashford is directed to paraquat and/or diquat formulations containing an alginate and an emetic and/or purgative. As recognized by the Examiner on page 7 of the January 21, 2009 Office Action, Ashford et al. do not teach the amine adjuvant which has no surfactant properties. The alginate gelling agents of Ashford are pH-triggered wherein the gelling effect take place at the acid pH of human gastric juice. It is not a polymer matrix in need of catalysis with the amines of Scher.

Scher discloses triethylene diamine (TEDA) as a catalyst in coating membranes for agrochemical use, including for glyphosate. Scher describes porous particles into which a polyurethane polymer is made *in-situ* by reaction of a polyol with a polyisocyanate. It is the reaction between the polyol and the polyisocyanate that can be catalysed by an amine, including triethylene diamine - this is conventional polyurethane technology. Contrary to the Examiner’s suggestion, Scher provides no motivation to include the amine that is used by Scher as a catalyst for the polyisocyanate/polyol reaction as an adjuvant in a paraquat and/or diquat agrochemical composition. These are simply completely different uses for the amines.

Contrary to the Examiner’ statement in the Advisory Action, Appellants do not teach utilizing TEDA as a catalyst in agrochemical formulations. The instant application does not teach the formation of polyurethane polymers made *in-situ* by reaction of a polyol with a polyisocyanate catalyzed by TEDA.

The Examiner has improperly taken a single component (TEDA) from the Scher reference and suggested that it would have been obvious to include this component in the formulation of Ashford. Ashford does not teach or suggest forming a polyurethane matrix and does not teach the presence of the very components that the amine of Scher is intended to catalyze. The Examiner has provided no rationale why one of ordinary skill would add a catalyst to a formulation where no catalysis is desired or required and where no components that could be catalyzed to form a polyurethane matrix are taught.

Accordingly, Appellants respectfully submit that the references have been improperly combined and whatever combination that is reasonably suggested by these references fail to teach or suggest the compositions of the present invention.

**Claims 14-20 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Ashford et al. (WO 02/076212) in view of Scher et al. (US 5,562,914) in further view of Humble et al. (US 6,734,141).** Appellants respectfully traverse.

The rejection of Ashford in view of Scher has been discussed above. Humble is relied on to teach additional components of the present claims, however, Humble fails to remedy the deficiencies of Ashford and Scher and provides no suggestion to include the amine catalysts of Scher in the formulations of Ashford.

Accordingly, Appellants respectfully submit that the references fail to teach or suggest the compositions of the present invention.

In view of the above arguments, Appellants respectfully submit that the provisional nonstatutory obviousness-type double patenting rejections and the rejections under 35 U.S.C. § 103(a) have been overcome and hereby request that this application be passed to issue.

## VIII. CLAIMS APPENDIX

1. (Previously presented) An agrochemical composition comprising an agrochemical active ingredient which is paraquat or diquat or mixtures thereof and an amine adjuvant selected from triethylenediamine (TEDA) or a salt thereof and tetramethylethylenediamine (TMEDA) or a salt thereof, which amine adjuvant has no surfactant properties, and wherein the ratio by weight of the amine adjuvant to the agrochemical active ingredient is from 1:10 to 1:2.
- 2 – 3 (cancelled)
4. (Previously presented) The agrochemical composition of claim 1 wherein the concentration of the paraquat or diquat or mixtures thereof is greater than 100 g/l.
- 5 – 7 (cancelled).
8. (Original) The agrochemical composition of claim 4 which further comprises from 10 to 400 grams per litre, of an electrolyte purgative.
9. (Original) The agrochemical composition of claim 8 wherein said electrolyte purgative is magnesium sulphate.
10. (Original) The agrochemical composition of claim 8 which further comprises an alginate which is a pH-triggered gelling agent such that a pH-triggered gel effect takes place at the acid pH of human gastric juice.
11. (Original) The agrochemical composition of claim 9 which comprises from 10 to 100 grams per litre of magnesium sulphate as an electrolyte purgative.
12. (Original) The agrochemical composition of claim 1 which further comprises a second adjuvant.
13. (Original) The agrochemical composition of claim 12 wherein said second adjuvant is a surfactant.

14. (Original) The agrochemical composition of claim 13 wherein said surfactant is selected from the group consisting of alkyl polyglycosides, betaines, alkylethoxy phosphates and salts thereof, alcohol ether carboxylic acids and salts thereof, alcohol ether sulphates and salts thereof.
15. (Original) The agrochemical composition of claim 12 wherein said second adjuvant is present at a lower concentration than said amine adjuvant.
16. (Previously presented) The agrochemical composition of claim 15 wherein said second adjuvant is selected from the group consisting of alcohol ethoxylates, amine ethoxylates, amine oxides and quaternary ammonium salts.
17. (Original) The agrochemical composition of claim 16 wherein the ratio by weight of the amine adjuvant to the second adjuvant ranges from about 50:1 to 1:50.
18. (Original) The agrochemical composition of claim 17 wherein the ratio by weight of the amine adjuvant to the second adjuvant ranges from about 10:1 to 1:10.
19. (Original) The agrochemical composition of claim 16 wherein the ratio by weight of the amine adjuvant to the second adjuvant ranges from about 1:1 down to 1:25.
20. (Original) The agrochemical composition of claim 19 wherein the ratio by weight of the amine adjuvant to the second adjuvant ranges from about 1:4 to 1:15.
21. (Original) The agrochemical composition of claim 12 wherein the ratio by weight of the amine adjuvant and the second adjuvant to the agrochemical active ingredient is preferably from about 1:10 to 10:1.
22. (Original) The agrochemical composition of claim 21 wherein the ratio by weight of the amine adjuvant and the second adjuvant to the agrochemical active ingredient is preferably from about 1:5 to 10:1.

## **IX. EVIDENCE APPENDIX**

An appendix containing copies of any evidence submitted pursuant to § § 1.130 – 1.132 or any other evidence entered by the examiner and relied upon by appellant in the appeal, along with a statement setting forth where in the record that evidence was entered in the record by the examiner.

The requirement of § 41.37(c)(1)(ix) of a statement setting forth where in the record the evidence was entered in the record by the examiner is met by an explicit statement entering the evidence or implicitly by an Office action weighing the evidence.

**X. RELATED PROCEEDINGS APPENDIX**

None

Respectfully submitted,

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Date: October 21, 2009